

REMARKS

Claims 1-15 are pending. Claims 3, 5, 6, 8-10, 12, 14, 15 are amended to eliminate multiple dependencies. Prompt and favorable consideration on the merits is respectfully requested.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Thomas J. Pardini
Registration No. 30,411

JAO:TJP/kaf

Enclosure:
Appendix

Date: February 21, 2001

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--

APPENDIX

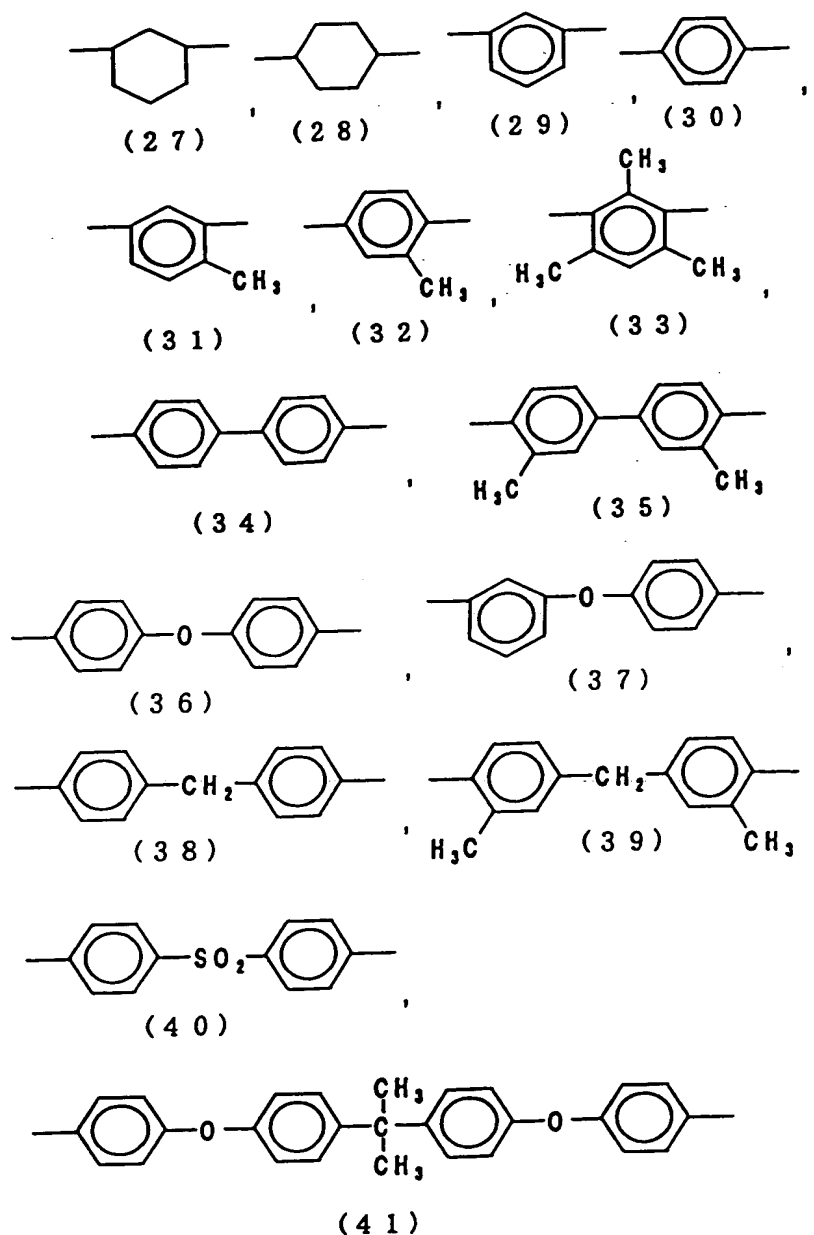
The following is a marked-up version of the amended claims 3,5, 6, 8-10, 12, 14, 15:

Claim 3.

Liquid crystal alignment agent according to Claim 1 ~~or Claim 2~~, where said polymer is polyamide.

Claim 5.

Liquid crystal alignment agent according to Claim 3 ~~or Claim 4~~, where R^{10} or R^{11} in the general formula (18) above or R^{12} and R^{13} in the general formula (19a) and (19b) are independently of each other radical selected from the formula (27) – (41) below

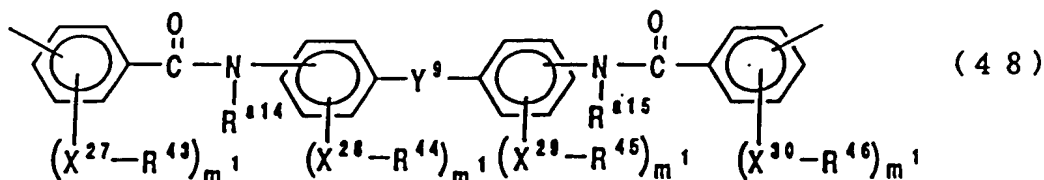
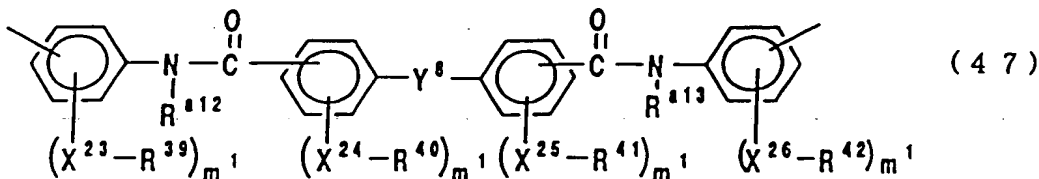
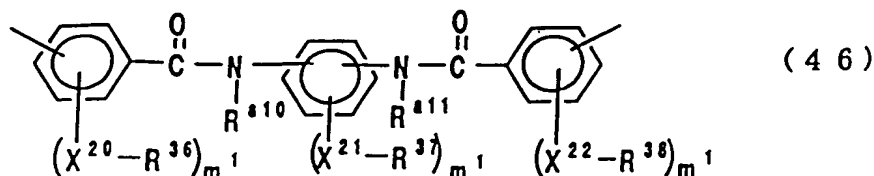
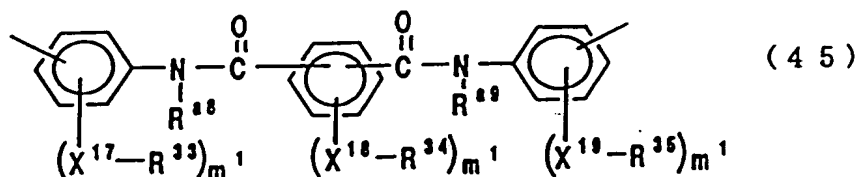
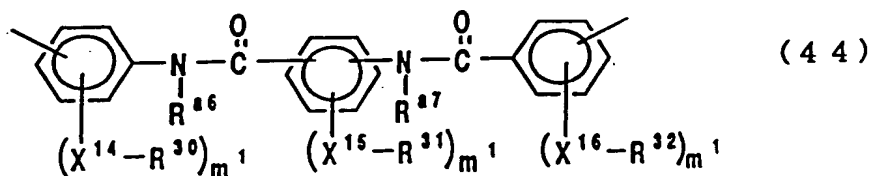
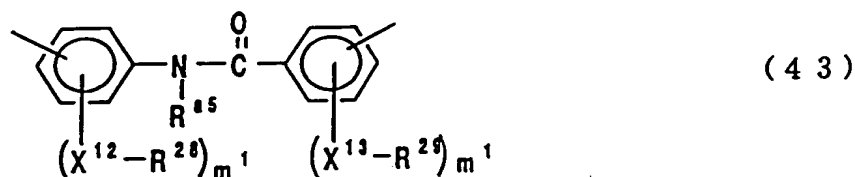


Claim 6.

Liquid crystal alignment agent according to Claim 1 ~~or Claim 2~~, where said polymer compound is polyimide precursor or polyimide obtained by chemical or heat imidization of said polyimide precursor.

Claim 8.

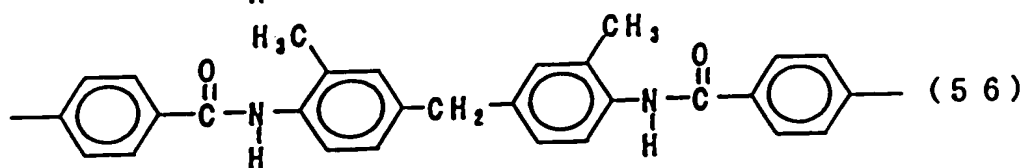
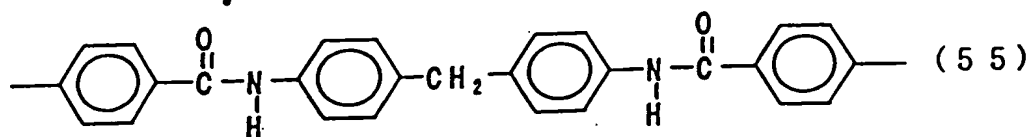
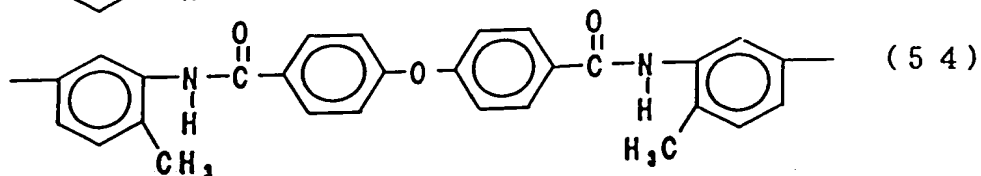
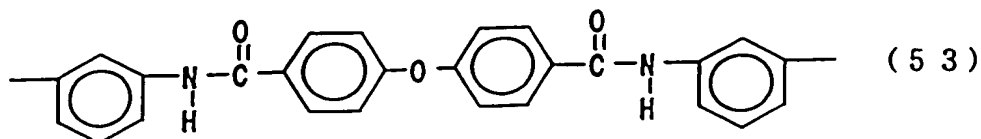
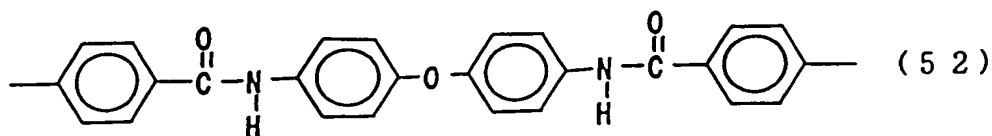
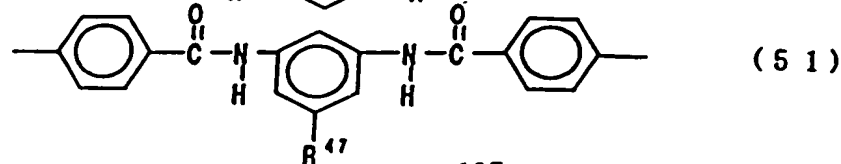
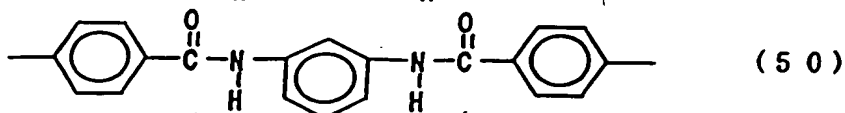
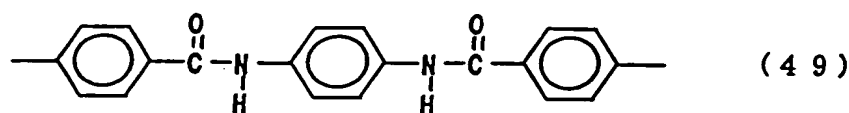
Liquid crystal alignment agent according to Claim 6 ~~or Claim 7~~, where R^{27} in the general formula (42a) and (42b) above is selected from the general formula (43) – (48) below



wherein X^{12} - X^{30} are independently of each other single bond, O, CO_2 , OCO or CH_2O ; R^{28} - R^{46} are independently of each other hydrogen, halogen, C_1 - C_{24} alkyl, C_1 - C_{24} alkyl containing fluorine, aryl, propargyl, phenyl or substituted phenyl; R^{a5} - R^{a15} are independently of each other hydrogen, alkyl, substituted alkyl, aryl or propargyl; Y^8 and Y^9 are O, S, SO_2 , CH_2 , NH, NHCO or CONH; and m^1 is an integer of 1 - 4 with the proviso that R^{28} - R^{46} are hydrogen or halogen, then X^{12} - X^{30} are single bond.

Claim 9.

Liquid crystal alignment agent according to ~~any one of Claim 6 through Claim 8~~, where radical for R^{27} in the general formula (42a) and (42b) above is selected from in the formula (49) - (56) below



wherein R^{47} is halogen, C_1 - C_{24} alkyl, C_1 - C_{24} alkoxy or C_1 - C_{24} alkoxycarbonyl.

Claim 10.

Liquid crystal alignment agent according to Claim 1 ~~or Claim 2~~, where said polymer compound is polyurethane.

Claim 12.

Liquid crystal alignment agent according to Claim 1 ~~or Claim 2~~, where said polymer compound is polyurea.

Claim 14.

Liquid crystal device by the use of the liquid crystal alignment agent according to ~~any one of Claim 1 through Claim 13~~.

Claim 15.

Alignment method of liquid crystals characterized by the use of the liquid crystal alignment agent according to ~~any one of Claim 1 through Claim 13~~, where light or electron rays being irradiated over the thin polymer film formed on the surface of the substrate and achieving liquid crystal alignment without rubbing action.